

# Notice of Allowability

Application No.

10/813,625

Examiner

Marie R. Yamnitzky

Applicant(s)

SAITO, KAORI

Art Unit

1774

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed April 13, 2007.
2. ☒ The allowed claim(s) is/are 1, 3-8, 10 and 11 (renumbered as 1-9, respectively).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 04302007.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

Art Unit: 1774

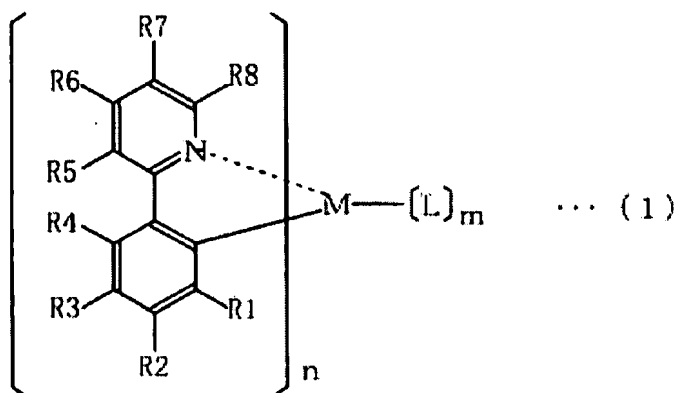
An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Nathaniel McQueen on April 30, 2007.

No extension of time is required to make this examiner's amendment because the amendment includes a change necessary to overcome an issue under 35 U.S.C. 112, second paragraph, that was not previously noted by the examiner.

Claims 1, 3 and 11 have been amended as shown in the following complete listing of claims:

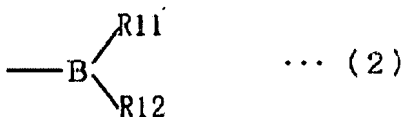
1. (Currently amended) A compound for light emitting device having a molecular structure expressed by the following formula (1):



Art Unit: 1774

wherein at least one out of R1 to R8 is a substituent containing boron; the others are each a hydrogen atom or a substituent; L is a ligand; M is a metal; m represents an integer from 0 to 4; n represents an integer from 1 to 3; and

said substituent containing boron is expressed by the following formula (2):



wherein R11 and R12 are identical to or different from each other, each being a hydrogen atom or a substituent.

2. (Cancelled)

3. (Currently amended) The compound for light emitting device according to ~~claim 2~~ claim 1, wherein said R11 and R12 are each a mesityl group.

4. (Original) The compound for light emitting device according to claim 1, wherein

said L is a ligand selected from the group consisting of a halogen ligand, a carboxylic acid ligand, an imine ligand, a nitrogen-containing heterocyclic ligand, a diketone ligand, a phosphorus ligand, an isocyanide ligand, an ortho carbometallation ligand, a hexafluorophosphine ligand, a cyclopentadienyl ligand, and a carbon monoxide ligand.

5. (Original) The compound for light emitting device according to claim 1, wherein

said L is a ligand selected from the group consisting of a picolinic acid ligand, a salicylic acid ligand, a salicylimine ligand, an acetylacetone ligand, and an ortho carbometallation ligand.

6. (Original) The compound for light emitting device according to claim 1, wherein

said M is a metal selected from the group consisting of iridium, platinum, palladium, rhodium, and rhenium.

7. (Original) The compound for light emitting device according to claim 1, wherein said R1 and R3 to R8 are each a hydrogen atom.

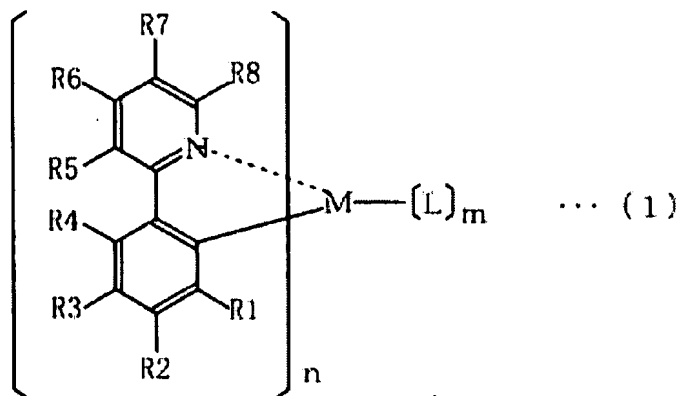
8. (Previously presented) An organic light emitting device comprising:

a hole injection electrode;

an electron injection electrode;

a light emitting layer provided between said hole injection electrode and said electron injection electrode, wherein

said light emitting layer contains an organic compound having a molecular structure expressed by the following formula (1):



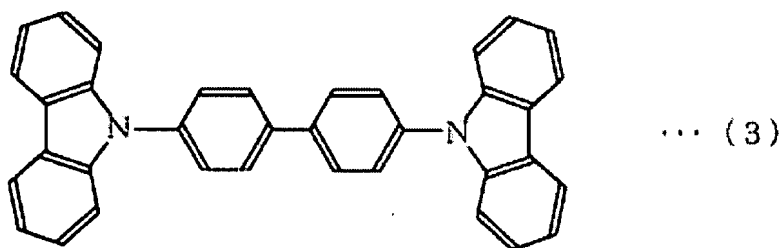
wherein at least one out of R1 to R8 is a substituent containing boron; the others are each a hydrogen atom or a substituent; L is a ligand; M is a metal; m represents an integer from 0 to 4; n represents an integer from 1 to 3; and

said light emitting layer contains a host material and said organic compound expressed by said formula (1),

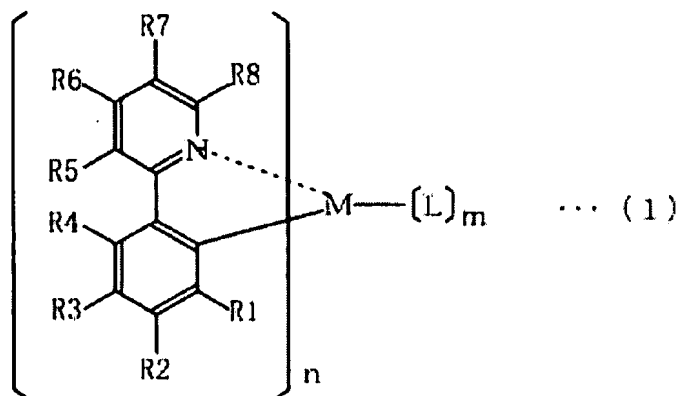
the content of said organic compound being not less than 0.1% nor more than 30% by weight of said host material.

9. (Cancelled)

10. (Previously presented) The organic light emitting device according to claim 8, wherein  
said host material is 4,4'-N,N'-dicarbazole-1,1'-biphenyl having a molecular structure  
expressed by the following formula (3)

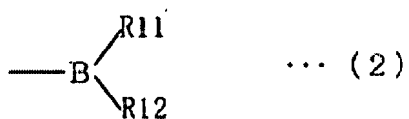


11. (Currently amended) An organic light emitting device comprising:
- a hole injection electrode;
  - an electron injection electrode;
  - a carrier transport layer provided between said hole injection electrode and said electron injection electrode; and
  - a light emitting layer provided between said hole injection electrode and said electron injection electrode, wherein
- at least one of said carrier transport layer and said light emitting layer contains an organic compound having a molecular structure expressed by the following formula (1):



wherein at least one out of R1 to R8 is a substituent containing boron; the others are each a hydrogen atom or a substituent; L is a ligand; M is a metal; m represents an integer from 0 to 4; n represents an integer from 1 to 3; and

said substituent containing boron is expressed by the following formula (2):




---

wherein R11 and R12 are identical to or different from each other, each being a hydrogen atom or a substituent.

Art Unit: 1774

Claim 1 has been amended to clarify which substituent is "said substituent".

Claim 3 has been amended to correct an error in claim dependency introduced by the amendment filed April 13, 2007.

The amendment to independent claim 11 overcomes the rejection of claim 11 under 35 U.S.C. 103(a) based on Ikehira et al. (US 2002/0193532 A1). The rejection of claims 1 and 4-8 under 35 U.S.C. 103(a) based on the Ikehira reference was overcome by the amendment to independent claims 1 and 8 in the amendment filed April 13, 2007.

Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 7:00 a.m. to 3:30 p.m. Monday-Friday.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY  
April 30, 2007



**MARIE YAMNITZKY  
PRIMARY EXAMINER**

1774